

Application No.: 10/757,388

REMARKS

I. Introduction

In response to the Office Action dated September 19, 2008, Applicants have incorporated the limitations of claim 2 into independent claim 1 to overcome the § 103 rejections, amended claim 3 to overcome the objection to the drawings, amended claims 1, 2 (to be incorporated into claim 1) and 19 to overcome informalities and to further clarify the subject matter of the present disclosure, and amended claims 3-10 to show proper claim dependency. No new matter has been added.

Applicants appreciate the indication of allowable subject matter recited in claims 2-5.

As a preliminary matter, Applicants note that the Office Action requires that line 6 of claim 19 to be amended to recite "a first conductor layer". Applicants would point out that line 3 of claim 19 recites "a first conductor layer" and as such, line 6 properly recites "the first conductor layer". In addition, as the limitations of claim 2 have been incorporated into claim 1, the elements of which have been added before original line 9 of claim 1, it is not necessary to amend the phrases "a first conductor layer" and "the first conductor layer" respectfully, as all elements now have proper antecedent basis.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

II. The Rejection Of Claims 19, 20 And 32-33 Under 35 U.S.C. § 102

Claims 19, 20 and 32-33 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yamada (USP No. 6,441,502). Applicants respectfully submit that Yamada fails to anticipate the pending claims for at least the following reasons.

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With regard to the present disclosure, amended claim 19 recites a semiconductor device comprising: a semiconductor chip, a multi-layer lead connected to the semiconductor chip and having a first conductor layer, and a piece of sealing resin, wherein...a part of the multi-layer lead except the portion of the multi-layer lead protruding from the principal plane of the piece of the sealing resin is sealed within the piece of the sealing resin.

One feature of amended claim 19 is that a part of the multi-layer lead, except the part protruding from the principal plane of the sealing resin, is sealed in the sealing resin. For example, Fig. 1B shows that the leads 10b and 10c are sealed within the sealing resin 13, except for the portions which protrude out from the principal plane of the sealing resin, located on the right side of the figure. As a result of this feature, a semiconductor device can be formed with a lead frame in such a manner that the lead portion exposed from the sealing resin comprises only the first conductor layer and as such, when the first conductor layer is made of stable metal such as, but not limited to, gold capable of forming an alloy together with the solder, a stable external terminal can be formed without conducting a plating process after completion of the sealing.

In contrast to the present disclosure, Yamada fails to disclose that a part of the multi-layer lead except the portion of the multi-layer lead protruding from the principal plane of the piece of the sealing resin is sealed within the piece of the sealing resin. As is shown in Fig. 10c of Yamada, no portion of the semiconductor device 31 protrudes from the sealing resin 22. As such, Yamada fails to disclose all of the limitations of amended claim 19 of the present disclosure.

Anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983). At a

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minimum, Yamada does not disclose a semiconductor device comprising a semiconductor chip, a multi-layer lead connected to the semiconductor chip and having a first conductor layer, and a piece of sealing resin, wherein...a part of the multi-layer lead except the portion of the multi-layer lead protruding from the principal plane of the piece of the sealing resin is sealed within the piece of the sealing resin. As such, it is clear that Yamada does not anticipate amended claim 19, or any claims dependent thereon. Furthermore, this feature is not obvious even for a person having an ordinary skill in the art. Accordingly, as all rejections of claim 19 have been addressed, Applicants submit that amended claim 19 is patentable over the prior art.

III. The Rejection Of Claim 1 Under 35 U.S.C. § 103

Claim 1 stands rejected, under 35 U.S.C. § 103(a), as being unpatentable over Ooyama et al. (USP No. 6,191,494) in view of Yoneda et al. (USP No. 6,072,239). Applicants respectfully traverse this rejection for at least the following reasons.

As the limitations of claim 2 have been incorporated into claim 1, and as claim 2 has been indicated to contain allowable subject matter, Applicants respectfully submit that amended claim 1 is allowable over the cited prior art, an indication of which is respectfully solicited.

IV. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 19 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

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minimum, Yamada does not disclose a semiconductor device comprising a semiconductor chip, a multi-layer lead connected to the semiconductor chip and having a first conductor layer, and a piece of sealing resin, wherein...a part of the multi-layer lead except the portion of the multi-layer lead protruding from the principal plane of the piece of the sealing resin is sealed within the piece of the sealing resin. As such, it is clear that Yamada does not anticipate amended claim 19, or any claims dependent thereon. Furthermore, this feature is not obvious even for a person having an ordinary skill in the art. Accordingly, as all rejections of claim 19 have been addressed, Applicants submit that amended claim 19 is patentable over the prior art.

III. The Rejection Of Claim 1 Under 35 U.S.C. § 103

Claim 1 stands rejected, under 35 U.S.C. § 103(a), as being unpatentable over Ooyama et al. (USP No. 6,191,494) in view of Yoneda et al. (USP No. 6,072,239). Applicants respectfully traverse this rejection for at least the following reasons.

As the limitations of claim 2 have been incorporated into claim 1, and as claim 2 has been indicated to contain allowable subject matter, Applicants respectfully submit that amended claim 1 is allowable over the cited prior art, an indication of which is respectfully solicited.

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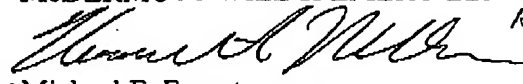
V. Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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